

REMARKS

Claims 19, 20, 22, 23, and 30 remain in this application with claim 19 in independent form.

REJECTIONS

1) Claim 23 stands rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. The Examiner contends that nowhere in the original specification is there support for the structural element “elastomer layer is bonded to an outer surface of said molding.”

2) Claim 23 stands rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter because the Examiner contends the limitation “elastomer layer is bonded to an outer surface of said molding” is vague and indefinite. Specifically, the Examiner contends that the specification lacks any disclosed structural relationship and that the specification did not include any definition regarding which side is an “outer surface”.

3) Claims 19, 20, and 22 stand rejected under 35 U.S.C. §102 as anticipated by, or in the alternative, under 35 U.S.C. §103(a) as obvious over Renzo (French Patent 2559862).

4) Claim 30 stands rejected under 35 U.S.C. §103(a) as being unpatentable under Renzo in view of Zeitler et al. (United States Patent No. 5,288,549).

INTERVIEW SUMMARY

Applicants appreciate the opportunity to discuss the above rejections with Primary Examiner Chang and Supervisory Patent Examiner Terrel Morris on November 14, 2007 in the telephonic interview. Specifically, rejections (1), (2), and (3) were discussed in detail and the substance of those discussions addressed below along with additional remarks.

Referring to rejections (1) and (2) directed toward the §112 rejections of claim 23, it was discussed that claims 22 and 23 were added on September 4, 2001 and entered by Examiner Roche without any objections or rejections under §112. Claims 22 and 23 are similar in that both claim a bonding site of a flexible microcellular elastomer layer relative to a surface of a rigid thermoplastic polyurethane molding. Furthermore, Examiner Roche issued 2 subsequent office actions without rejecting claim 23 on this basis, Supervisory Patent Examiner Terrel Morris issued 1 subsequent office action without rejecting claim 23 on this basis, and Examiner Change issued 3 subsequent office actions without rejecting claim 23 on this basis. It was more than four years after being entered, on September 28, 2005, and after 6 subsequent office actions, that Examiner Chang, for the first time, rejected claim 23 under §112.

Previously, Examiner Chang entered Figures 1-3 as part of the specification in his Office Action dated January 7, 2004. It is well established that the figures form a part of that application as set forth in the Manual of Patent Examination Procedure (MPEP) §2163.06¹. Figures 1-3 illustrate well known motor vehicle composite damping elements that, in

¹ MPEP 2163.06, "...information contained in *any one* of the specification, claims or drawings of the application as filed *may be added to any other part* of the application without introducing new matter" (emphasis added)

accordance with the subject invention, are formed from the flexible microcellular elastomer layer being bonded to and in direct contact with at least one surface of the rigid thermoplastic polyurethane molding.

As set forth in Applicant's Response dated November 14, 2003, there were numerous areas of support for the Figures in the specification as originally filed. Specifically, Applicant directed the Examiner to the following in the specification as originally filed: Page 1, lines 20-34; Page 4, lines 43-47, Page 5, lines 1-5; Page 9, lines 4-16; Page 9, lines 22-27; Page 10, lines 14-36; and the example section.

Thus, in addition to the specification as originally filed, Figures 1-3 explicitly support the limitation "elastomer layer is bonded to an outer surface of said molding". Moreover, it is submitted that it is inconsistent examination that the Examiner has only rejected claim 23. If claim 22 has adequate support in the specification, including Figures 1-3, then claim 23 must also be adequately supported, thereby making the Examiner rejections of claims 23 improper.

Those of ordinary skill in the art, upon reading the subject application, specifically, page 9, lines 4-9, in view of "Fahrwerktechnik: Radaufhängungen", 2nd Edition, ed. Prof. Dipl. -Ing. Jornsens Reimpell, Vogel Buchverlag Würzburg, which is discussed on page 1, lines 23-26, of the specification as originally filed, would find adequate support for the structural element "elastomer layer is bonded to an outer surface of said molding" of claim 23. Thus, it is appreciated that those of ordinary skill in the art recognize that the necessary structure, or configuration, to replace any such prior art rubber-metal composites is inherent in the composite damping element of the subject invention. In view of the discussion with Examiner

Chang and Supervisory Patent Examiner Morris, in view of the above, it is submitted that the §112 first paragraph rejection, (1) above, should be withdrawn.

Referring specifically to the §112, second paragraph rejection, (2) above, which was raised for the *first* time in the Office Action dated October 3, 2007, more than *six* years after being entered, it is well understood that definiteness of claim language must be analyzed, not in a vacuum, but in light of (1) the content of the particular application disclosure, (2) the teachings of the prior art, and (3) the claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made. It was discussed with Examiner Chang and Supervisory Patent Examiner Morris that the specification as originally filed does not limit the configuration or orientation of the thermoplastic polyurethane molding and the microcellular polyurethane elastomer layer. It is only necessary to bond the elastomer layer in direct contact with the at least one surface of the molding. Thus, the specification as originally filed has implicit support for any orientation, including the elastomer layer bonded to an outer or an inner surface of the molding. Additional support can be found at the following: Page 1, lines 20-34; Page 4, lines 43-47, Page 5, lines 1-5; Page 9, lines 4-16; Page 9, lines 22-27; Page 10, lines 14-36.

Moreover, as was specifically discussed in the interview, Applicants have provided numerous examples of well known motor vehicle damping elements, see Applicants Response dated February 23, 2006, that included portions of an English version of “Fahrwerktechnik: Radaufhängungen”. The inclusion of this reference was merely to illustrate numerous prior art damping elements having different orientations and configurations of the rigid metal and

flexible rubber. The rubber is very clearly shown adhered to inner and outer surfaces of the rigid metal as would be understood by one of ordinary skill in the art of automotive dampers. Thus, the inventors at the time of the invention were in possession of the flexible microcellular polyurethane elastomer layer being bonded to inner and outer surface of the rigid thermoplastic polyurethane molding.

In view of the above, it is submitted that the limitation “elastomer layer is bonded to an outer surface of said molding” is not vague and is definite and would be understood by one of ordinary skill in the art upon reading the specification. Therefore, the §112 second paragraph rejection should be withdrawn.

Referring to (3) above, MPEP §706.02(m), paragraph 7.27 indicates circumstance that are appropriate to alternatively reject claims under §102 or §103(a). These circumstances include:

- i) where the interpretation of the claim(s) is in dispute resulting in a §102 rejection given one interpretation and a §103 rejection under given another interpretation;
- ii) when the reference discloses all the limitations of a claim except a property or function, and the Examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention but has basis for shifting the burden of proof to applicant;
- iii) when the reference teaches a small genus which places a claimed species in the possession of the public;
- iv) when the reference teaches a product that appears to be the same as, or an obvious variant of, the product set forth in a product-by-process claim although produced by a different process;
- v) when the reference teaches all claim limitations except a means plus function limitation and the examiner is not certain whether the element disclosed in the

reference is an equivalent to the claimed element and therefore anticipatory, or whether the prior art element is an obvious variant of the claimed element; or

- vi) when the ranges disclosed in the reference and claimed by applicant overlap in scope but the reference does not contain a specific example within the claimed range.

To date, the Examiner has not indicated why the “alternative” rejection is necessary and has not provided clear guidance for the Applicants to adequately respond to the “alternative” rejection as was discussed with Examiner Chang and Supervisory Patent Examiner Morris. This clearly conflicts with the guidelines set forth in MPEP 706.02(m).

In fact, on numerous occasions, Applicants have identified the limitation “a rigid thermoplastic polyurethane molding having a thickness of from 2 to 10 mm” and specifically “a thickness of from 2 to 10 mm” is not disclosed in Renzo. Further, Applicants have directed the Examiner to Figure 6 of Renzo that illustrates the thermoplastic bellow 50 as being flexible and moved between a compressed and an uncompressed state, thus *not rigid*. Referring to the circumstances identified in paragraph 7.27, it is respectfully submitted that none of the circumstance apply to these omitted limitations. The Examiner contends that such limitations are anticipated by Renzo, or obviously provided by practicing the invention for the same end use.

When a claim is rejected under §102, the Examiner has the initial burden of establishing anticipation. “[I]t is incumbent upon the Patent Office . . . to set forth clearly why it regards a claim to be anticipated “ *In re Mullin*, 481 F.2d 1333, 1336, 179 U.S.P.Q. 97, 100 (C.C.P.A. 1973). The Examiner may not merely assert that a particular reference anticipates a claim.

Moreover, it is well known that rejection of a claim under §102 requires that each and every limitation be found in the cited reference. If even a single limitation of the rejected claim is not found in the cited reference, a rejection under 35 U.S.C. §102 is improper and must be withdrawn. To anticipate a claim, a single source must contain all of the elements of the claim. See *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1379, 231 U.S.P.Q. 81, 90 (Fed. Cir. 1986); *Atlas Powder Co. v. E.I. du Pont De Nemours & Co.*, 750 F.2d 1569, 1574, 224 U.S.P.Q. 409, 411 (Fed. Cir. 1984); *In re Marshall*, 578 F.2d 301, 304, 198 U.S.P.Q. 344, 346 (C.C.P.A. 1978). ***Missing elements may not be supplied by the knowledge of one skilled in the art or the disclosure of another reference.*** See *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 716, 223 U.S.P.Q. 1264, 1271 (Fed. Cir. 1984). Moreover, the single source must disclose all of the claimed elements “arranged as in the claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989); *Connell v. Sears Roebuck & Co.*, 722 F.2d 1542, 1548, 220 U.S.P.Q. 193, 198 (Fed. Cir. 1983).

As set forth in MPEP §2112, the express, implicit, and inherent disclosures of a prior art reference may be relied upon in the rejection of claims under 35 U.S.C. §102 or 35 U.S.C. §103. However, in relying upon the theory of inherency, the Examiner ***must provide a basis in fact and/or technical reasoning*** to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.

In the present application, the claimed invention is a motor vehicle composite damping element comprising i) a ***rigid*** thermoplastic polyurethane molding having ***a thickness of from 2***

to 10 mm and ii) a *flexible* microcellular polyurethane elastomer layer chemically bonded to and in direct contact with at least one surface of the *rigid* thermoplastic polyurethane molding. The rigid thermoplastic polyurethane molding supports the microcellular polyurethane elastomer layer while dampening and absorbing vibrations occurring within the transverse link, the longitudinal link, the triangular link, the rear-axle subframe, the stabilizer, the spring-strut support, or the shock-absorber.

As discussed with Examiner Chang and Supervisory Patent Examiner Morris, it is well known that damping elements for a transverse link, a longitudinal link, a triangular link, a rear-axle subframe, a stabilizer, a spring-strut support, or a shock-absorber of a motor vehicle have heretofore been manufactured from rubber-metal composites, which is also described above. The prior art rubber-metal composite used in the shock-absorber of the motor vehicle has the metal portion supported by a shaft within the shock-absorber and the rubber portion positioned to absorb and dampen vibrations received by the shock-absorber. The *rigid* thermoplastic polyurethane molding has replaced the metal component and the *flexible* microcellular layer has replaced the rubber component. As discussed at length in the specification as originally filed, these prior art rubber-metal composites have disadvantages that include high density of the metal constituents, short service life of the rubber, and loss of adhesion between the rigid metal and the flexible rubber (*see page 1, lines 20-34 of the originally filed specification*). The subject invention overcomes these disadvantages.

Examiner Chang raised, for the first time in his Office Action dated October 3, 2007 on page 8, that Applicants are not claiming a replacement for well known metal/rubber

damping elements. During the interview, it was confirmed that Examiner Chang was implying that the Applicants should add this type of claim language to the claim. As was discussed with Examiner Chang and Supervisory Patent Examiner Morris, such a limitation was already presented in the claims as early as September 2001 and Examiner Chang objected to such language in March 2003. Applicants attempted to amend the language to advance prosecution and Examiner Chang again objected to the language in January 2004. Applicants removed the language in April 2004 again in an attempt to advance prosecution. Now, nearly *four years later*, Examiner Chang suggests Applicants are not claiming a metal/rubber damping element replacement. During the interview, it was suggested that if such language would advance prosecution, Applicants would consider adding such language once again.

As also discussed with Examiner Chang and Supervisory Patent Examiner Morris, Examiner Chang relies on a Derwent Abstract, one page in length to interpret Renzo, which is a French patent written in French. Examiner Chang has not attempted to obtain an English translation and instead argues that the omitted features are inherent. Such a position is inconsistent with the obligation and duties required to be performed by Examiners and the Patent Office.

Based upon the Figures in Renzo and the Derwent Abstract, Renzo discloses a composite shock absorber, such as a jounce bumper, that is well known to those of ordinary skill in the art. *A jounce bumper is not a metal-rubber damping element and has a different end use than the claimed invention.* The shock absorber includes a cellular elastic 51 surrounded

by a thermoplastic polyurethane bellow 50. Referring to Figure 6 of Renzo, the shock absorber is shown in a compressed state. As can be seen, the polyurethane bellow 50 is also compressed. Therefore, the polyurethane bellow 50 is flexible to accommodate such compression.

In view of the foregoing, Renzo does not inherently disclose a rigid thermoplastic polyurethane molding having a thickness of from 2 to 10 mm. Instead, Renzo discloses a thermoplastic bellow that surrounds the cellular elastic and that is flexible. It is submitted that the Examiner's rejection under §102 is improper as the omitted limitations are not inherently disclosed in Renzo and should be withdrawn.

Applicant respectfully traverses the 35 U.S.C. §103(a) rejection based upon Renzo. When applying 35 U.S.C. §103, the following tenets of patent law *must* be adhered to:

(A) The claimed invention *must be considered as a whole*;

(B) The references *must be considered as a whole* and must suggest the desirability and thus the obviousness of making the combination;

(C) The references must be viewed *without the benefit of impermissible hindsight* vision afforded by the claimed invention; and

(D) Reasonable expectation of success is the standard with which obviousness is determined. *Hodosh v. Block Drug Co., Inc.*, 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986).

To avoid hindsight, the Examiner must step backward in time and into the shoes worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown and just before it was made. In view of all factual information, the Examiner must then make a

determination whether the claimed invention “as a whole” would have been obvious at that time to that person. Knowledge of Applicant’s disclosure must be put aside in reaching this determination. The tendency to resort to “hindsight” based upon Applicant's disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight *must be avoided* and the legal conclusion *must be reached on the basis of the facts gleaned from the prior art*. See MPEP §2141.

Applicant submits that the Examiner is relying on impermissible hindsight to reach a determination of obviousness and there is no suggestion, teaching, or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. If one skilled in the art viewed the references without impermissible hindsight, the combination is unlikely to have resulted in a composite damping element received in a transverse link, a longitudinal link, a triangular link, a rear-axle subframe, a stabilizer, a spring-strut support, or a shock-absorber.

In addition to the above tenets, to establish a prima facie case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and *not based on Applicant’s disclosure*. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Applicants submit that it is not obvious to modify Renzo to arrive at the claimed invention. First, when viewing the claimed invention as a whole, the subject invention claims a replacement for well known metal-rubber damping elements comprising a ***rigid thermoplastic***

polyurethane molding that supports a flexible microcellular polyurethane elastomer layer such that the flexible microcellular layer dampens and absorbs vibrations occurring within the transverse link, the longitudinal link, the triangular link, the rear-axle subframe, the stabilizer, the spring-strut support, or the shock-absorber. When viewing Renzo as whole and without impermissible hindsight, Renzo merely discloses a shock absorber to absorb shock formed from a flexible bellow 50 that must be able to compress and distribute the shock to a cellular elastic 51.

The Examiner has not articulated a basis and has not explained the reasons one of ordinary skill in the art would have been motivated to modify Renzo to render the claimed invention obvious. The Examiner has merely identified the portions of the claimed elements in Renzo, i.e., a cellular portion and a thermoplastic portion, and relies on impermissible hindsight to argue that Renzo renders the claimed invention obvious.

The Examiner has not provided any discussion as to why it would be obvious to modify Renzo. Applicants submit that Renzo teaches away from modifying Renzo to arrive at the claimed invention because the bellow 50 must be flexible in order to absorb shocks. If the bellow 50 were rigid, then the bellow 50 would not be compressible and would not be able to absorb shock. Therefore, Renzo teaches away from forming the bellow 50 from a rigid material.

Impermissible Use of Hindsight

The use of hindsight is not permissible when making an obviousness determination.

The CAFC stated,

Determination of obviousness can not be based on the hindsight combination of components selectively culled from the prior art to fit the parameters of the patented invention. There must be a teaching or suggestion within the prior art, or within the general knowledge of a person of ordinary skill in the field of the invention, to look to particular sources of information, to select particular elements, and to combine them in the way they were combined by the inventor. See Heidelberger Druckmaschinen AG v. Hantscho Commercial Prods., Inc., 21 F.3d 1068, 1072, 30 USPQ2d 1377, 1379 (Fed.Cir. 1994) (“When the patented invention is made by combining known components to achieve a new system, the prior art must provide a suggestion or motivation to make such a combination.”); Northern Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 935, 15 USPQ2d 1321, 1324 (Fed.Cir. 1990) (the prior art must suggest to one of ordinary skill in the art the desirability of the claimed composition); Interconnect Planning Corp. v. Feil, 774 F.2d 1132, 1143, 227 USPQ 543, 551 (Fed.Cir. 1985).” ATD Corp. v. Lydall, Inc., 159 F.3d 534, 546, 48 USPQ2d 1321, 1329 (Fed. Cir. 1998). (attached as Exhibit D.)

It is respectfully submitted that the modification of Renzo employs impermissible hindsight and does not consider the claimed invention as a whole. In other words, the claimed invention is being analyzed element by element as a roadmap to find the prior art components and the Examiner is discounting the value of modifying these elements in a new way to achieve a new result.

In the subject invention, the novel and unique composite damping element provides for a replacement for prior metal-rubber damping elements. Therefore, it is respectfully submitted that the Examiner has failed to provide any suggestion or motivation to modify Renzo to arrive at the subject invention as claimed without impermissible hindsight.

One skilled in the art confronted with the problem facing the inventor, namely to develop a replacement for metal-rubber damping elements, would not be motivated to modify the teachings Renzo without a reasonable and articulated basis, which is lacking.

Each and Every Feature Not Disclosed

Further, even if one assumes that Renzo could be modified, the modification does not disclose, either expressly or inherently, each and every limitation as claimed in the subject application and the *prima facie* case of obviousness has still not been established. As discussed above, Renzo does not disclose, teach, or suggest the claimed thickness of the rigid thermoplastic polyurethane molding ***between 2 and 10 mm***. Renzo also does not disclose any composite damping element to dampen and absorb vibrations occurring within the transverse link, the longitudinal link, the triangular link, the rear-axle subframe, the stabilizer, the spring-strut support, or the shock-absorber.

As such, even when modified, Renzo fails to disclose, teach, or suggest each and every limitation of the claimed invention. In view of the above, the 35 U.S.C. §103 rejection should be withdrawn.

With reference to (4) above, while this was not discussed specifically with Examiner Chang and Supervisory Patent Examiner Morris, Applicant respectfully traverses the §103 rejection.

Zeitler is directed towards use of the composite element in dashboards that are not to be continuously and repeatedly compressed. The composite element dashboard is located in the interior of the passenger compartment. The cellular polyurethane acts as a noise damping element to reduce noise from the engine and as a cushioning element in the rare instance when a force is exerted against the surface of the dashboard. The molding, or skin, in Zeitler improves the dashboard's aesthetic properties and encloses the cellular polyurethane to conceal it from the

occupant. The skin is not used to allow the dashboard to be attached in the interior of the passenger compartment.

The subject invention, on the other hand, is a composite damping element having both the rigid thermoplastic polyurethane molding and the flexible microcellular polyurethane elastomer layer. The molding serves to position the elastomer layer relative to and in one of a transverse link, a rear-axle subframe, a stabilizer, a longitudinal link, a spring-strut support, a shock-absorber, and triangular link. It would not be obvious to combine a base layer of an interior dashboard with an element in a jounce bumper as disclosed in Renzo. The type of noise and vibration being dampened by the dashboard is not the equivalent type of shock and vibration being dampened by the jounce bumper and the base layer in the dashboard does not serve the purpose of the rigid thermoplastic polyurethane molding in the subject invention.

Therefore, there is no motivation to combine these references. The dashboard is directed to preventing engine noise from being heard by the occupants and serves as a secondary cushioning element, if necessary. The jounce bumper of Renzo is continuously and repeatedly compressed. Noise and vibration damping is not equivalent to shock and vibration damping, nor is it an obvious variation. One skilled in the art of shock and vibration damping systems for the running gear of an engine would not look to interior dashboard systems.

Further, the Examiner states that Zeitler et al. discloses a ratio of isocyanate groups to hydroxyl groups range of from 0.85:1 to 1.1:1 for adding rigidity to the base layer. Thus, Zeitler et al. teaches forming the base layer without an excess of isocyanate groups and does not disclose bonding the microcellular polyurethane elastomer layer in direct contact therewith. In

other words, Zeitler et al. teaches away from the subject invention of having an excess of isocyanate reactive groups and bonding the microcellular polyurethane elastomer layer in direct contact therewith. Accordingly, the 35 U.S.C. §103 rejection is believed to be overcome.

CONCLUSION

For the reasons set forth above, it is believed that the §112 rejections of claim 23 should be withdrawn and that that §103 rejections of claims 19, 20, 22, 23, and 30 are overcome. Thus, claims 19, 20, 22, 23, and 30 are believed to be allowable.

It is respectfully submitted that the Application is now presented in condition for allowance, which allowance is respectfully solicited. Applicant believes that no fees are due, however, if any other or additional fees become required, the Commissioner is hereby authorized to charge such fees or credit any overpayments to Deposit Account 08-2789.

Respectfully submitted

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